

REMARKS

Claims 1-2, 7-16, 22-24 and 39-42 currently appear in this application. The Office Action of October 24, 2003, has been carefully studied. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicants respectfully request favorable reconsideration, entry of the present amendment, and formal allowance of the claims.

Specification

The term "dipping" is said to be new matter. Accordingly, the term "dipping" has been replaced by the term -setting--.

Rejections under 35 U.S.C. 112

Claims 1-2, 7-1, 13-16, 22-25 and 39-41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims are said to contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The term "dipping is alleged to be new matter.

This rejection is respectfully traversed. The term "dipping" has been replaced by the term --setting--.

Claims 1, 2, 7-11, 13-16, 22-25 and 39-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

This rejection is respectfully traversed.

- a. The claims have been amended to define a hydrocarbon as "having from 1 to 10 carbon atoms."
- b. The claims have been amended to recite "coupled" rather than "introduced." This language makes it clear that the epoxy radical is coupled using a coupling agent.
- c. The claims have been amended to define a hydrocarbon as "having from 1 to 10 carbon atoms."
- d. The claims have been amended to define a hydrocarbon as "having from 1 to 10 carbon atoms."

Art Rejections

Claims 1, 11, 13-16 and 25 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 1039a) as obvious over Chrisey et al. as defined by Sumiya et al.

This rejection is respectfully traversed. Chrisey et al. disclose a substrate having a native organosilane coating or an organosilane coating that has been reacted with a heterobifunctional crosslinker. It is clear from the claims of the present invention that there is no organosilane coating on the substrate, and the only coupling agents claimed are titanium or aluminum coupling agents. The claims recite that a carboxyl radical is bound to the substrate by setting the substrate into a solution containing a hydrocarbon having from 1 to 10 carbon atoms having a carboxyl group. Chrisey et al. use silanes to couple the reactive groups to the substrate. In the present invention, no silane coupling agents are used, and the modified polar radical is attached to the substrate using a hydrocarbon having the desired polar substituent.

Claims 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chrisey et al. as defined by Sumiya et al. in view of Fodor et al.

This rejection is respectfully traversed. As described above, the substrates of the present invention do not have the reactive polar groups coupled to the substrate by a silane coupling agent. The disclosure of Fodor et al. adds nothing to Chrisey et al., because Fodor et al. do not disclose or suggest how the reactive groups are coupled to the substrate.

Claims 2, 7, 8 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chrisey et al. in view of Kobashi.

This rejection is respectfully traversed. The claims have been amended to a diamond substrate to which is bound a carboxyl radical through a hydrocarbon chain. There is no silane coupling agent as required by Chrisey et al., and Kobashi do not teach that the diamond substrate has bound to it a carboxyl radical through a hydrocarbon chain.

Allowable Subject Matter

Claims 9 and 10 are said to be free of the prior art of record. Additionally, as the Examiner has stated that claims drawn to a substrate wherein the surface is modified to contain a polar radical selected from the group consisting of carboxyl, epoxy or amino and comprising a hydrocarbon wherein the radical is connected to the surface via a titanium or


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aluminum coupling agent would be free of the cited prior art.
Accordingly, claim 42 has been submitted, and claims 9 and 10
are now dependent from claim 42.

In view of the above, it is respectfully submitted
that the claims are now in condition for allowance, and
favorable action thereon is earnestly solicited.

Respectfully submitted,

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